



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2023-0025; Project Identifier MCAI-2022-00804-T]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc., Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-2B16 (604 Variant) airplanes. This proposed AD was prompted by reports of oxygen leaks caused by cracked, brittle, or broken oxygen hoses that were found during scheduled maintenance tests of the airplane oxygen system. This proposed AD would require replacing oxygen system hoses having any part number in the O2C20T1 and O2C20T14 series. This AD also would prohibit installation of affected oxygen hoses. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0025; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For service information identified in this NPRM, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](https://www.bombardier.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

**FOR FURTHER INFORMATION CONTACT:** Elizabeth Dowling, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include

“Docket No. FAA-2023-0025; Project Identifier MCAI-2022-00804-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

#### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Elizabeth Dowling, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

Transport Canada, which is the aviation authority for Canada, has issued Transport Canada AD CF-2022-34, dated June 20, 2022 (Transport Canada AD CF-2022-34) (also referred to after this as the MCAI), to correct an unsafe condition on certain Bombardier, Inc., Model CL-600-2B16 (604 Variant) airplanes. The MCAI states oxygen leaks were caused by cracked, brittle, or broken oxygen hoses that were found during scheduled maintenance tests of the airplane oxygen system. A leak in the oxygen system may result in failure to provide oxygen to passengers and crew and result in an oxygen-enriched atmosphere creating a fire risk on the airplane. See the MCAI for additional background information.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0025.

## **Related Service Information Under 1 CFR Part 51**

The FAA reviewed Bombardier Service Bulletin 605-35-006, Revision 01, dated January 28, 2022. This service information specifies procedures for replacing oxygen system hoses having any part number in the O2C20T1 and O2C20T14 series.

The FAA also reviewed Bombardier Service Bulletin 650-35-002, Revision 01, dated January 28, 2022. This service information specifies procedures for replacing oxygen system hoses having any part number in the O2C20T1 series. The service information also specifies optional mitigating actions for certain airplanes (repetitive testing until affected parts are replaced).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## **FAA's Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information described above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

#### **Proposed AD Requirements in this NPRM**

This proposed AD would require accomplishing the actions specified in the service information already described. This proposed AD would also prohibit installation of affected oxygen hoses.

#### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 42 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

##### **Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
3 work-hours X \$85 per hour = \$255	\$100	\$355	\$14,910

##### **Estimated costs for optional actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
1 work-hour X \$85 per hour = \$85	\$85	\$85

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any optional mitigating actions. The FAA has no way of determining the number of aircraft that might need this on-condition action:

### Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
3 work-hours X \$85 per hour = \$255	\$100	\$355

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

#### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Bombardier, Inc.:** Docket No. FAA-2023-0025; Project Identifier

MCAI-2022-00804-T.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Bombardier, Inc., Model CL-600-2B16 (604 Variant) airplanes, certificated in any category, serial numbers 5701 through 5990 inclusive, and

6050 through 6162 inclusive, with an interior modified in accordance with Supplemental Type Certificate (STC) ST02355NY.

**(d) Subject**

Air Transport Association (ATA) of America Code 35, Oxygen.

**(e) Unsafe Condition**

This AD was prompted by reports of oxygen leaks caused by cracked, brittle or broken oxygen hoses that were found during scheduled maintenance tests of the airplane oxygen system. The FAA is issuing this AD to address a leak in the oxygen system. The unsafe condition, if not addressed, could result in failure to provide oxygen to passengers and crew and result in an oxygen enriched atmosphere creating a fire risk on the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Replacement**

At the applicable compliance times specified in paragraphs (g)(1) and (2) of this AD: Replace oxygen system hoses having any part number in the O2C20T1 series, and, as applicable, the O2C20T14 series, in accordance with the Accomplishment Instructions of the applicable service information specified in figure 1 to paragraph (g) of this AD.

(1) For airplanes having, as of the effective date of this AD, 6 years or less from the completion of the interior modification specified in STC ST02355NY: Within 31 months after the effective date of this AD, or no later than 12 months after the completion of the interior modification specified in STC ST02355NY, whichever occurs first.

(2) For airplanes having, as of the effective date of this AD, more than 6 years from the completion of the interior modification specified in STC T02355NY: Within 7 months after the effective date of this AD.

**Figure 1 to paragraph (g) – Service Information**

<b>Bombardier Airplane Model–</b>	<b>Bombardier Service Bulletin–</b>
CL-600-2B16 (604 Variant) Challenger 605	605-35-006, Revision 01, dated January 28, 2022
CL-600-2B16 (604 Variant) Challenger 650	650-35-002, Revision 01, dated January 28, 2022

**(h) Optional Mitigation for Certain Airplanes**

For airplanes identified Bombardier Service Bulletin 650-35-002, Revision 01, dated January 28, 2022, having, as of the effective date of this AD, less than 6 years from the completion of the interior modification specified in STC ST02355NY: In lieu of accomplishing the oxygen system hose replacement required by paragraph (g) of this AD, comply with all conditions specified in paragraphs (h)(1) through (3) of this AD.

(1) The passenger oxygen system is tested within 6 months after the effective date of this AD, and thereafter at intervals not to exceed 36 months, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 650-35-002, Revision 01, dated January 28, 2022.

(2) If, during a test specified in paragraph (h)(2) of this AD, any leak is found on any hose, all oxygen system hoses having a part number in the O2C20T1 series must be replaced before further flight in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 650-35-002, Revision 01, dated January 28, 2022. Doing this replacement terminates the tests specified in paragraph (h)(1) of this AD.

(3) Except as specified by paragraph (h)(2) of this AD, all oxygen system hoses having a part number in the O2C20T1 series must be replaced within 6 years from the completion of the interior modification specified in STC ST02355NY. Doing this replacement terminates the tests specified in paragraph (h)(1) of this AD.

**(i) Parts Installation Prohibition**

As of the effective date of this AD, no person may install any oxygen system hose having a part number in the O2C20T1 and O2C20T14 series on any airplane.

**(j) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 605-35-006, dated August 23, 2021; or Bombardier Service Bulletin 650-35-002, dated August 23, 2021; as applicable.

(2) This paragraph provides credit for actions specified in paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 650-35-002, dated August 23, 2021.

**(k) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the New York ACO Branch, mail it to ATTN: Program Manager, Continuing Operational Safety, at the address identified in paragraph (k)(2) of this AD or email to: 9-avs-nyaco-cos@faa.gov. If mailing information, also submit information by email. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada; or

Bombardier, Inc.'s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(l) Additional Information**

(1) Refer to Transport Canada AD CF-2022-34, dated June 20, 2022, for related information. This Transport Canada AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0025.

(2) For more information about this AD, contact Elizabeth Dowling, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (4) of this AD.

**(m) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 605-35-006, Revision 01, dated January 28, 2022.

(ii) Bombardier Service Bulletin 650-35-002, Revision 01, dated January 28, 2022.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](https://www.bombardier.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on January 24, 2023.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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